DOCUMENT RESUME

ED 077 523 LI 004 350

AUTHOR Boaz, Martha
TITLE Planning and Designing: The Future in Library Education.
INSTITUTION ERIC Clearinghouse on Library and Information Sciences, Washington, D.C.
PUB DATE [71]
NOTE 34p.; (25 References)

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS Educational Innovation; *Futures (of Society); *Information Science; *Librarians; *Library Education; Library Planning; *Library Schools; Library Science; Library Services; Manpower Utilization; Professional Education

ABSTRACT

By the year 2,000 numerous changes will make this world very different from today's society. Our economy will be based on education and service related jobs instead of product-production. The population will almost double, and leisure time will increase dramatically due to increased automation. Continuous learning, often outside the formal educational system, will be emphasized. Libraries will have to grow and adapt to meet the increased demands of leisure and education on their collections and services. Library education must begin now to prepare future librarians to anticipate and be responsive to the needs of all library users. Changes in library education may include: (1) increased variety of programs; (2) more independent study; (3) emphasis on outreach programs; (4) offering technician programs at the undergraduate level; (5) more interdisciplinary work; (6) work outside the traditional classroom. Finally a commission should be appointed to prepare a long-range plan for library education on a national level. (Author/DH)

ED 077523

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

PLANNING AND DESIGNING THE FUTURE IN LIBRARY EDUCATION

By

Martha Boaz, Dean

School of Library Science
University of Southern California

LI 004 350

FILMED FROM BEST AVAILABLE COPY

The Need For Planning

Planning for the future of library education is of great importance, for development in the right direction is essential and should be a planned rather than an accidental development. By looking ahead we can hope to control the future, to anticipate and avoid problems, and to foresee desirable opportunities.

Research is necessary if planning is to be of value and very little research has been done in universities and almost none in library schools. This situation must change if progress is to take place. The vital elements in basic research are originality and enthusiasm. The interest and eagerness of young people must be tapped and funding for research must be made available to the interested younger generation. The opportunities for communicating information, for making library resources available, and for extending library services are unlimited. This theory is based on the assumption that the library profession will attract people with intelligence and enthusiasm who can plan and develop such services.

Certain natural forces and social changes are involved in any design or research plans. These include changing population patterns, educational trends, institutional and political variations and different societal values. In order to plan for library education for the future it is first necessary to try to look into the future, to forecast the trends, to assess the role of the library in the society of the future and to plan the educational programs of library schools. The first section of this paper will attempt a forecast of the social milieu in which libraries will be operating during the next twenty years.

There are general predictions about the future--that jobs will be eliminated as automation progresses, that the work week will be reduced to twenty hours, that too much leisure will result in a pleasure-oriented society, feverishly seeking new interests, perhaps going towards a hedonistic culture and towards a decline of civilization.

In a leisure-oriented society, according to predictions by Herman Kahn and Anthony Weiner in their book, The Year 2,000, one will be able to spend 40 percent of his days on a vacation; 40 percent of his days on a vocation; 20 percent (or more than one day a week) on neither--that is, just relaxing. Careful planning, foresight as to possibilities, and directing research and development into fruitful channels can provide an alternative to a pleasure-dominated society. Robert W. Prehoda, author of the book, Designing the Future, advocates involving a larger portion of the population, each year, into a research economy and thus perhaps improve our lives beyond our present wildest expectations. Prehoda says, " Science may be on the threshold of greatly extending the life span to 100 years, 200 years, or more. If all causes of biological aging are discovered and cured, man eventually may have an indefinite life span extending many centuries."[1] Prehoda goes on to predict several other interesting possibilities. He says the longer life span implies learning new skills, but we will have different educational patterns, we will have computer-controlled teaching machines and chemicals will improve memory retention and raise basic intelligence. Children may start to school when they are only three years old; new electronic devices may reduce the need for as much sleep as we have now and provide restorative powers; polution and transportation problems may be solved; the electric car may

eliminate smog and hypersonic aircraft may transport a person anywhere on earth within two or three hours; a flight into space which is now very expensive may be no more expensive than a present day trip from Canada to India. The colonization of the moon may happen sooner than is currently expected.[2]

> All forms of communication will be improved. Color television will be coupled to the telephone, allowing instantaneous conferences between several individuals thousands of miles apart. Drawings and written material will be reproduced instantaneously by electrostatic attachments to the vidophone consoles. Letters and important documents will be sent electronically....
>
> We will soon begin to communicate directly with machines... These supercomputers will evolve into "intelligence amplifiers.... Data from a world library will be summarized quickly. The machine will inform scientists which specialists to contact for information that may not yet be recorded.[3]

Thus, it seems that library services and the communication of recorded information may be extended beyond our most extravagant dreams. Before proceeding to specific suggestions for libraries one should note some of the possible trends which would be involved in planning for libraries.

CHANGES AHEAD IN GENERAL

The material progress which is predicted for the future will undoubtedly be accompanied by social change and societal problems. There will be the problems of congestion, boredom due to excessive leisure, and a growing gap between the affluent and the poor and a concurrent environmental decay.

Prospects for the remaining 70's are bright according to a report of the Chamber of Commerce of the United States*. The next decade will be one of

* Note: Many of the population figures and predictions quoted have been extracted from Chamber of Commerce of the United States. America's Next 30 Years: Business and the Future. Washington, D. C.[1970?].

prosperity. The stock market will be much higher, double its current level. Technology will advance and there will be a surge of innovation. There will be more young people in the population and they will be earning more and living better than ever before.

Population Trends

Population growth is a major factor in planning for the future. In the year 2,000 there may be almost 7 billion people in the world or double the present total, according to the United Nations. In the next century there may be 25-30 billion people or 10 times today's population, predicts Glen Seaborg, Chairman of the Atomic Energy Commission. The Census Bureau estimates that by 1975 there will be 224 million Americans. The total could reach 266 million by 1985 and 325 million by the year 2,000. Less developed areas of the world will increase their population by 170 percent--more developed areas by 60 percent. One of the world's leading demographers, Philip Hauser, says we'll need to quadruple our food production to feed the population in the year 2,000. A younger population, approximately 82 percent of the population by 1975, will be under the age of 35. We are moving towards a national population in which half of the people will be under 26 years in a few years. Whereas the teen-age labor force will grow more slowly, the number of persons in the age class 25 to 34 will increase at a dramatic rate and the number of workers in the 45-64 age group will decline.(5) Markets for consumer goods will change to meet the needs of younger families and there will be greater expenditures for education, training, homes, applicances

and other items that are of interest to the young people. Leaders in business and government in the next 25 years will be members of the younger generation who will have known only affluence and economic growth.

The Labor Force

By the late 1970's there will be a large labor upturn, an increase of more than 15 million workers. One and one-half million jobs must be created each year to absorb this increase in new workers. Ten million of the 15 million will be in the 20-34 age group. The percentage of workers in the 35-54 age group will decline as will the number of teenage workers. Another significant trend will be the increase in the number of married women working. By 1975 there will probably be 33 million women in the U.S. work force, an increase of 25 percent over the previous 10-year period. Most of the increase will be in the 45 and over age bracket. Still another major change will be the greater number of non-whites in the labor force. By 1975 there will be an increase of over 11 million non-white workers, an increase of 25 percent over a 10-year period. By comparison, whites will only increase 18 percent in number. By 1980 the Negro labor force is expected to total 12 million. Many of the non-whites will be in the lower age brackets. There will be a 54 percent increase in the teen-age non-whites eligible for employment, and 5 percent increase in non-whites in their early twenties eligible for employment.

The growth in service-producing activities will continue. This is the only country in the world which deploys a majority of its workers in the production of services rather than goods. This will increase to 65 percent by 1975.

Employment in the goods-producing sector of economy will drop from 40 to 35 percent of total employment and service employment will rise from approximately 60 percent of the total employment in 1956 to 65 percent in 1975. The predicted changes indicate the following trends:

1. More than one out of every six workers will be in government service;
2. One of every five will be earning a living by buying and selling;
3. Less than five percent of the work force will produce all food, and feed for the country;
4. About 25 percent of the work force will still be factory workers;
5. White collar jobs will increase. Blue collar workers will decline;
6. The unskilled, by 1975, will represent less than 5 percent of the work force;
7. The biggest percentage of labor force increase will be in the states of California and Florida.

Population on the Move

One out of every five families moves each year in the United States. In the projected future urbanization, the population will grow faster in suburban areas of cities and, more slowly, perhaps with a further decline in the central city. Shifts in population will alter the political map. California will gain 4 new seats in Congress, making California the top ranking political state in the nation.

Urbanization

By the year 2,000 85 percent of the nation's population will live in urban areas. City daytime populations will increase, but suburban areas will spread outward, and many will meet and join with the fast growing suburbs of smaller cities. There may be trends towards "new model cities" or satellite cities similar to those planned for Reston, Virginia and Columbia, Maryland.

Problems and Opportunities

There will be more markets, also more problems. Nearly 64 million more people will need to be fed, clothed, housed, educated, transported, and entertained. Human problems will be created in impoverished nations with scanty food supplies. Industry will have to find new sources of food such as fabricating protein from crude oil. The impact already crowded urban areas will be greater.

Urban Problems and Markets

The private sector may have to devise solutions for urban problems. Many activities now provided by public bureaus could be engaged in by private industry on a profit-making basis. One research agency has predicted there may be a market of several trillion dollars for private enterprise to rehabilitate slum housing; there may also be a potential market for several hundred billion dollars for new aids to education and another potential market for $300 billion for solutions to problems of air and water pollution.

Political and Business Trends

Forecasts indicate: (1) Continuing expansion of Federal power and influence, but some decentralization of power to state and local levels; (2) more effective partnership between business and government; (3) increase in government employment; and (4) reshaping of some of the essential elements of a free enterprise system. In business the key problem will be "environmental adjustment." One of the main characteristics of the "post-industrial society" is an accelerating growth of the services sector. Universities will gain power through better methods and approaches for evaluating goals. Society will expect business to place greater emphasis on the "quality" of life especially on a continuing education and the personal development of employees as well as on quality in products (safety and design). Business will be expected to contribute to the "social cost of urban problems." And this is only right, for many of the problems are ones business helped create.

Changing Values and Attitudes

With increasing affluence, a more youthful population will be concerned with subjective values, with their personal lives, and with their relationship to society. There will be less emphasis on the value of work, a greater interest in privacy and open spaces; social issues will revolve around an attractive environment, cleaner cities, health, and human fulfillment. Efforts will be made to eliminate discrimination, suffering, and poverty.

Economic Growth

According to figures published by the Chamber of Commerce of the United States,[6] continued economic prosperity is forecast for the next thirty years. By the year 2,000, family purchasing power will probably be two-thirds above that of today. By 1980 one family in three will be earning $15,000 a year and by the year 2,000 it is foreseen that hourly wages will average $7.50 compared with $2.82 now. Increased income will bring about changing family and personal values. More money will be spent on education and self-improvement, on recreation and leisure activities, on travel and personal and family activities.

Changes in Education

Highlights in educational changes projected by the National Chamber's Council on Trends and perspectives include the following: The greatest change in education will be at college and university level. By 1976 ten million people will be enrolled in colleges and universities. More growth will occur in public colleges, but also a 42 percent increase will take place in private colleges from 1965-1976. But there will be a drop in students attending private colleges from 35 percent in 1965 to 27 percent in 1975 and to 20 percent in 1985. The greater enrollment in public institutions will bring about new public campuses, expansion of existing campuses, and conversion of private colleges and universities to state supported institutions. By 1976 there will be more college students in graduate or professional work, double the present number. The number of degrees will nearly double at the Bachelor's and Master's levels and will more than double at the doctoral level. It is estimated that it will take 60 percent more faculty to handle the college enrollment in 1976.

Educational costs will increase, suggesting the need for making education more productive. Serious problems facing higher education will be:

(1.) The financial issue and sources of funds. The states and private sources now pay 80 percent of the bill; will they continue to pay in this proportion? What role will the Federal government play? What effect will this have on the independence of academic institutions? (2.) The Quality of instruction. It has been noted that rising cost has not been offset by measurable increases in productivity. (3.) Relevance. Should academic institutions continue to concentrate on teaching or be more concerned with solving social problems? (4.) Equal opportunity for the disadvantaged. How can the disadvantaged be helped, how can education be taken to them? (5.) Business management techniques. These should be used to bring about a greater productivity in higher education.

Education and the Future

According to all projections there will be increased demand for education of all types. Education has helped change the United States from a goods economy to a knowledge economy. By the late 1970's the U. S. "knowledge industries" (which produce and distribute ideas and information rather than goods) will account for one-half of the total U. S. National product. That is, every other dollar earned and spent in the American economy will be earned by producing and distributing ideas and information and will be spent on procuring ideas and information. Education will become a "super" growth industry. There will be emphasis on continuous learning, re-training and education throughout a person's career and adult education and post graduate courses will be offered.

The foregoing predictions and trends indicate that society has a challenge in the character of society itself. In relation to this thought, Daniel Bell, a Columbia University Professor, serving as moderator at a meeting of a panel on science and technology, described three periods of society: " A pre-industrial society is essentially one based upon raw materials or a game against nature, and in which there is diminishing returns. An industrial society is organized primarily around energy and the use of energy for the productivity of goods. A post-industrial society is organized around information and utilization of information in complex systems, and the use of that information as a way of guiding the society."(7)

Bell goes on to point out that " those institutions primarily concerned with the codification of theoretical knowledge, become primary to society, because theory now, in effect, guides the way to practice. We have in a post-industrial society, a reduction of empiricism and a growth of theory.(8)

Herman Kahn expands Bell's theory when he says: " It is only in the post-industrial or near post-industrial societies that the overwhelming majority of people make their living in some form or another from the knowledge industry. And the intellectuals (people who derive their experience of the world in a second-hand manner, deal mainly with ideas, and who often attempt to idealize or intellectualize issues) become a numerous or even dominant group as a result of their sheer numbers."(9)

The value theory of education is advanced by Charles A. Reich in the current best seller, The Greening of America, when he discusses the importance of human

values versus the organization and versus materialism. He foresees a new age of man, an age in which the supreme act is the act of choice and the main concern of man should be how and for what ends he lives. Reich says that most of our education has taught us how to operate the technology, how to function in an organization, but " what we need is education that will enable us to make use of technology, control it and give it direction, cause it to serve values which we have chosen.(10) Reich believes that:

> ...each person should pursue several careers, either simultaneously or successively during his life. This is not only feasible today, it is necessary and essential. It is necessary so that individuals do not become technologically obsolete, with skills that are no longer needed. Constant change in technology means that a varied and changing career is mandated for all, even if they would prefer to remain in just one occupation and just one institution. There are today many instances of individuals having more than one career, either at the same time or in sequence; indeed, large corporations sometimes make it a policy to move their men from one job to another. This is the protean man of the future, living several different lives and having a variety of work-experiences. But there is a great difference between him and the role-playing man of today whose several roles are schizophrenically separated from each other and from the self within, like masks that a player puts on and takes off at will. What consciousness must do is help the new protean man to integrate his many experiences into a whole: a single, meaningful life.(11)

Reich points out that the new generation rejects the idea that a school or college is the only possible institution to supply education, that there are many other institutions which can provide education.(12)

Thomas F. Green, Director, Educational Policy Research Center, Syracuse University, comments on the post-industrial society and various forms of education outside the formal setting. He says, " We must keep in mind that the post-industrial society is likely to require an enormous expansion in learning--not necessarily in

education, And not for a few short periods of time, but for many. What it will require is not degrees but skill. The two should not be confused. The educational system does not seem the most promising direction in which to seek an answer as to how that can be done. It will probably be done best through many forms of education outside the formal system of schooling."[13] Green declares that growth of education outside the formal system has probably been the most significant change in education over the years just past. Current estimates at the Educational Policy Research Center at Syracuse indicate that in the United States in the current year, more people will be receiving instruction of a formal sort outside the formal educational system than within it..." Work itself will need to be organized for its educative value instead of organizing education for its value to work."[14]

Today library education like all education is facing the question which Professor George Counts of Teachers College asked in the 1930's, " Dare the Schools Build A New Social Order?" George Kozmetsky, Dean, College of Business Administration and Graduate School of Business, University of Texas says challenges to seven basic assumptions of recent educators are being evolved. These assumptions and challenges are:[15]

(1) Education is a privilege.--There is increasing acceptance that education is a universal necessity that has yet to be based on meaningful standards.

(2) Schools must group, sort, and screen students as to their ability and responsibility.--There is increasing awareness that schools will accept, stimulate, and nurture each child to find his proper level.

(3) Education must be separated from the real world.--There is increasing awareness that there is a broad area of congruence between education's role as a service to society as well as the shaper of society.

(4) Schools are the only educative force in our society.--There is increased recognition that schools are not the only educative forces. There are other enterprises, public and private, involved in meaningful education that will be interrelated with the school systems for a lifetime of individual learning.

(5) Education is exclusively a process by which the older generation transfers relevant knowledge to the younger generation.--There is growing awareness that much of what the young people need to know for their generation's time today's educators have yet to learn and that there is a growing need to learn more things together.

(6) The process of learning is essentially a formal process.--There is a growing awareness that there is a great deal of informal learning outside the classroom. This is evident in mass media, industrial corporation training programs, and military-services training.

(7) The teaching-learning environment is primarily batch processing involving teacher and students.--The fear of technological devices (e.g., computers) is being gradually replaced by the growing awareness that these devices are natural extensions for the individuality of teaching as well as for the individual's development of creativity and inventiveness.

THE FUTURE OF LIBRARIES

So, we examine the predictions of general conditions and social trends in the years ahead. We think of the need for libraries and for the education of librarians and we come back to H. G. Wells who has been much quoted for his statement, " human history becomes more and more a race between education and catastrophe." And, we say glibly that a well informed society is crucial for the solution of many of society's problems. Yet, in the United States, less than four percent of our Gross National Product is spent on education. Twice this amount is spent on automobiles; an allocation of eight percent of the GNP

for education would greatly increase our effectiveness in technical development and social progress. The opportunities for educational development and for libraries are almost limitless, but they will require billions of dollars to develop, produce and incorporate in schools, colleges and universities.

The library of the future will enter into an increasingly vigorous competition with other social service institutions for state and local funds that will be inadequate to meet a whole range of explosive social needs. We shall have to plan for ways of raising revenue and gaining support of libraries. Then we can make plans for libraries and library education.

Assuming that financial support will be provided, libraries must be prepared to serve in an environment which will require services over and beyond those provided by the conventional libraries of today. The library must become an adaptive unit and be ready to change within and without the organizational framework in order to ensure its survival. A delay in transferring knowledge between science and technology can no longer be tolerated. Direct service to users will be required of librarians and information specialists.

Janice Ladendorf, Information Specialist of the North Star Research and Development Institute, Minneapolis says that "the ever increasing rate of technological change, the information explosion, and the current revolution in communications are all working to create an environment in which the adjustment to change and the need for effective information systems are increasingly acute. Uncertainty and change demand a high degree of human creativity to cope with them, and effective information systems are essential to this kind of coping. In today's

information rich environment, those who exploit these information resources most effectively are the ones who will succeed.[16]

Emerging Library Responsibilities

We turn now to the role of libraries and their responsibilities. Dan Lacy, a Vice-President of the McGraw Hill Publishing Company outlines five principal responsibilities of libraries:

(1.) To support formal education, from prekindergarten through graduate and professional schools.

(2.) To sustain the increasingly complex operations of the Government and the economy of the country.

(3.) To provide opportunities for continuing self-education and retraining.

(4.) To play a role in the reintegration into the society of groups now largely issolated and excluded by their lacks in education and training.

(5.) To provide resources for an informed public opinion and for personal cultural and intellectual growth and individuation.[17]

One proceeds from these responsibilities to the environment in which libraries operate and to an analysis of the library needs of a community and to such questions as: What is the social, economic and industrial composition of it? How large is the population? What is the educational profile? What is the age distribution? What types of services are desired and needed? To what extent can these services be provided by other organizations? And, what are the unmet needs of users and of potential users of libraries?

And we know that whenever change begins in libraries it must start with conditions as they exist. Any planning and any action must relate to social agencies now operating even if one tries to circumvent them by establishing new agencies.

In relation to the library, Vern M. Pings, a librarian asks these questions:[18] 1. What would happen to society if the library suddenly died, and how many people would it affect? 2. What are the possible consequences of altering any of its stated functions? 3. What other social agencies does it assist or support, or conversely, with what other agencies does it conflict?

The library, like any other institution, must meet certain conditions to survive. According to the experts, these conditions are: (1.) It must be sufficiently stable to sustain the ideal which gave it birth; (2.) it must be responsive and remain relevant to the society which supports it. Assuming that the library will fulfill both of these requirements, one can also assume that libraries of the future will, to some extent, continue present trends, while at the same time they will become and should become different.

Predictions About Libraries of the Future

Libraries of the future will, without doubt, be inclusive and comprehensive in the types and kinds of materials they acquire. The information explosion will continue and proliferate. The presses will pour forth a Niagra Falls of materials. Information in all of its forms must be provided. These materials will range from traditional books and printed materials to films, microforms, audio materials and all other types of communication media. Methods of communication will include the reading of traditional printed page as well as dial access in libraries, touch-tone telephones from a home to a library and telefacsimile copies flashed by wire over thousands of miles of space in a matter of seconds. Thus, technology will provide "instant information."

The library of the future will be asked to furnish more extensive and more specialized materials and services. A better educated and more sophisticated population will demand depth and breadth of library materials on subjects of interest to them.

Interlibrary cooperation which has begun in various parts of the country is likely to become increasingly important. This move on the part of libraries to meet the demands of modern society for access to a great number of library materials is directed either toward gaining physical access or towards achieving bibliographic access to these materials. Interlibrary borrowing and lending have become major operations in American libraries. In addition bibliographic access is provided through union catalogs which contain the cards of two or more libraries interfiled in a single alphabet. Information is thus available as to which library actually has a copy of the specific book required.

Another form of cooperation is in cooperative acquisitions; thus libraries collaborate in acquiring collectively the maximum number of books and journals which are required. They may agree to be responsible for subject specializations; as for example, in the Chicago area, the John Crerar Library concentrates on science, technology, and medicine; the Newberry Library emphasizes the humanities and history.

Several libraries have embarked upon cooperative storage. The proliferation of books has forced many libraries to remove less-frequently-used materials from active collections and store them in nearby buildings of less expensive construction. Still other cooperative enterprises include cooperative telephone reference service

and cooperative building planning.

Other cooperative efforts include such as the Interuniversity Communications Council (EDUCOM) established in 1965; this is an association of institutions of higher education for the purpose of "optimizing the use of the emerging communication sciences." Another is the Joint Committee on National Library and Information Systems (CONLIS) which is a group of library associations joined together to plan a program to improve access and availability of information through networks of information centers and libraries. Library networks will promote more economical expenditures and more extensive use of library materials, services, facilities and personnel.

THE FUTURE OF LIBRARY EDUCATION

Planning for library education, as has been indicated already, should be preceded by a study of libraries, their roles, their organization, and their services. Prior to this planning for libraries there must be a survey of the needs and interests of users of libraries.

Types of Library Schools and Education Programs

It is likely that there will be greater variation in the types and kinds of library schools. There will probably be some Master's Degree programs which will require two years of study beyond the Bachelor's Degree. These programs will afford more opportunity for a basic core program plus more specialization and more opportunity for research. The latter is almost non-existent in the present one-year curriculum. There may also be more intensive programs than that of the

present one-year Master's Degree course. For example, educational programs may be planned that will be intensive in nature and shorter in duration. Summer vacations were originally planned to accommodate an agricultural society where children helped with the harvest and where heat in school buildings was such as to inhibit learning. With only a very small percentage of the population working on farms and with air conditioning in modern buildings, these conditions no longer prevail. The present 5 day school week could be extended to include Saturdays and the whole educational program could be accelerated. Furthermore, expensive physical facilities which are often not used now for several weeks or months during the summer could be used for year-around programs.

There may be and probably should be more experimental library school programs. It is hoped that those schools having Ph. D. programs can adapt the present traditional study pattern to more experimental and independent study and that Master's candidates can also work on individual projects, if they have the interest and ability to pursue such projects. It seems feasible that there will be a combination of some of the courses which are now taught as isolated units into larger programs with discernable inter-relationships in their parts.

Courses Needed

There should be more courses which stress the "out-reach" theory of taking the library to the people. Opportunity should be provided for students to have practical experience in working with all actual and potential users of libraries, experience in "getting to the people", to minority groups, to drug-abuse individuals, to the poor and ignorant, to the elderly and disabled and to others who need

information and help. Students should be trained to work with and assist other agencies who are working with these groups. There should be more courses which train students in public relations, in political acumen, in fiscal awareness, in knowledge of business organization, systems analysis, and in research methods. The National Advisory Committee's publication, Libraries At Large, points out that libraries of the future will need "managers broadly trained and educated generalists with a good sense of educational and cultural goals. More subject specialists will be needed. Staff will have more training in interviewing and counseling techniques and procedures and will be more "outreach" oriented. More specialists in such fields as publicity, community relations, and business management will be required."(19) Future support of libraries will have to be based on requests supported by research-backed logically-presented data. Methods and techniques for these presentations should be learned in library school.

Library schools should consider offering a technician curriculum. The professions of medicine and law are already adding technician curricula in their areas. Library schools have nothing to loose and much to gain by preparing people for different jobs within the total library career pattern.

It is likely that future entrants into the library profession will, prior to practicing in the field, be required to take a state or national examination. Thus the profession will be better recognized and there will be greater protection for its practitioners.

Continuing Education

In a plan for continuing education, one school might be developed to provide a comprehensive program which would synthesize the general materials of all continuing education needs. A number of experienced teachers and practioners, outstanding in each of the specialties, might be brought together as a faculty. In such an atmosphere, continuing education could proceed at a high level and research could be carried on by persons with the background to do it.

A number of people have suggested that different schools specialize in training for a specific type of library work, as for example, one might specialize in the education of public librarians and another in the education of special librarians.

Specialization

Michael Reynolds, a professor in the School of Library and Information Science, University of Maryland, is in agreement with this philosophy that there should be specialization among the schools, that the traditional pattern of offering a common core of document controlled activities in all the schools should be changed. He says this is especially applicable in the field of special librarianship which, he says, exists midway between librarianship and information science and requires specialized schools, special admission requirements and a specialized curriculum. Mr. Reynolds places especial emphasis on preparing librarians to work intensively with clients in a particular type of information agency (20) The trend towards the use of bibliographers in libraries indicates a need for attention to this employment trend

The Service Concept

A vital and important factor in all future planning for the library profession in all types of libraries is the use of libraries. This must be emphasized and repeated. Library education must be aware of client requirements and must prepare the emerging librarian for direct involvement in the user's information needs. The non-user must also be considered. It is generally agreed that non-users can be attracted to use libraries if the institutions themselves reach out and find out the needs of the people and provide services accordingly. The librarian must be interested, aware, immersed in this concept of professional service. The library profession must be alert to change in the environment and general culture and must be prepared, in advance, to adapt and to change libraries and library services to accommodate to the future. Michael Reynolds says there must be " a desire on the part of the school and the emerging professional to change librarianship from a profession in which the librarian occupies a position, performing a set activity, to one in which the librarian is directly involved in the information requirements of a client. Library education must be comparable to total immersion, resulting in integral awareness by the librarian of client requirements; and, most important, it must endeavor to establish in the student a condition of mind which seeks continuously to integrate the dynamics of a changing environment into library practice. The cause, therefore, for my trepidation lies in the simple truth, that we in the library profession have a hard day's work ahead of us."(21)

Technology and Teaching methods

The library curriculum of the future must include courses in the use of technology in libraries and its continuing implications for library services. Included under technology and teaching materials will be the use of computers and data processing, information retrieval, facsimile transmission, microwave, microfilm, microfiche, instructional television, cartridge loading films and projectors, video tape recorders, remote control television, slide and film strip projectors, film loops, audio tapes, standard touch-tone telephones in student homes, and others.

Various teaching methods and procedures should be used in all the courses. These should include the following: (1.) the traditional Socratic discourse, and the lecture method, (2.) Computer-assisted instruction, (3.) use of MARC tapes, (4.) case study methods, (5.) team teaching, (6.) simulation techniques, (7.) group dynamics, (8.) independent study, and (9.) off campus practice experience.

The interdisciplinary approach should be a feature in the curriculum of any school. The student with a home base in the library school should have access to the facilities and resources of the larger university.

Atmosphere of Learning

Highly desirable for the library school of the future will be an atmosphere designed architectually to symbolize a total learning atmosphere.

Recruitment

In relation to future personnel needs in the library world library schools should try to recruit into the profession more people from minority groups, more women and more younger persons. This plan would be in accord with the earlier predictions in this paper that these groups will be important forces in the future labor market. Not only will they be involved in the work force, but they will be serving similar peer groups in the library-consumer market. The profession will also require more research-oriented people and more with managerial skills.

A Library Without Walls--A Library School Without Classrooms

Just as librarians may go outside of their library walls and into community, courses in library schools of the future may not necessarily be held in formal classroom settings as they now are. Classes can be presented on television; students may enroll for these classes and view them on their home television sets. (One such class has just been completed on a commercial television station by the University of Southern California Library School.)

The student of the future may be able to move from one school to another for different courses or for the specializations of different schools. Or, the student of the future may enroll in a course offered on a ship which will go from one country to another in an international atmosphere. There may be these and many other unheard of, undreamed of study situations that will make learning an exciting adventure.

Educating For Cope-ability

Future plans must prepare students to become involved in activities that do not exist and may never develop. They should experiment in futurology. The plans may sound like science fiction and as Robert Prehoda says, "The ' ultimate ' in foreseeable communications is the prospect of contacting intelligent beings inhabiting planets revolving around other stars in our galaxy."[22] Real education consists not in the memorization of facts but in the ability to use knowledge, to make critical judgments, and to establish new relationships and new social patterns.

In order to carry out plans, we need a committee or a designated body that has power, resources, and authority to function and to execute plans. I have suggested, in a speech I made recently the appointment of such a body. I repeat here that I would like to propose the creation of a specific body, that is a National Commission on Improvement, Innovation, Research and Evaluation of Libraries and Education. This idea is similar to a suggestion of the Committee for Economic Development but is focused particularly on library education. Like the CED proposal, it is suggested that this commission should include persons of unquestioned stature as educational statesmen and that the Commission be established by Congress as an independent, non-governmental agency, empowered to receive both public and private funds.[23] Long range planning for the future should be on a national scale and should receive attention from the most intelligent and dedicated leaders in our society.

SUMMARY

Predicting the future is dependent on the perception of stable and repeatable patterns in space and time. General trends and changes that are likely to occur include:

General Trends:

(1.) a population growth to (almost 7 billion people in the world by the year 2,000); (2.) a younger population; (3.) a prolonged life span; (4.) an increase in the number of married women working; (5.) an increase in non-white workers; (6.) a growth in service-producing activities and a decrease in goods-production; (7.) an increase in white collar jobs and a decrease in blue collar jobs; (8.) increased leisure time for many workers; (9.) a population on the move (from one geographical area to another); (10.) a definite trend towards urbanization; (11.) increase in government employment; (12.) a change in values and attitudes; with more concern for subjective values; (13.) continued economic prosperity, but with increasing disparity between the rich and the poor; (14.) higher enrollments in colleges and universities; (15.) increasing educational costs; conversion of private colleges and universities to state supported institutions; (16.) emphasis on continuous learning, retraining and education throughout a person's career; (17.) a trend towards education outside the formal system.

Libraries and Change:

Libraries must be aware of all of these trends and must be ready to accommodate to them and to society's demands for library and information services. Changes that will influence libraries and their services are: (1.) there will be an increasingly vigorous competition with other agencies for state and local funds; (2.) more attention will be given to the needs of users and to potential users of information services; (3.) a better educated population will demand more materials and better services from libraries; (4.) interlibrary cooperation and library networks will become increasingly important; (5.) the new technology will continue to be an important factor in libraries and will have great influence on their services.

Library Education and the Future:

Library education must prepare future librarians to work in libraries that are responsive to and that anticipate the needs of all library users. To this end there may be the following changes: (1.) library schools may become more varied in their programs; some of them may have two-year Master's Degree programs, others may have more accelerated and intensive programs than the traditional Master's curriculum, others may develop more experimental programs; (2.) there will be more attention to independent study; (3.) courses may be combined into larger groupings than now exist; (4.) especial attention will be given to "reaching the unreached" people in society; (5.) emphasis will be placed not on in-house library activities, but on reaching the users and non-users of libraries; the concept

of service will be very important. (6.) library schools may offer technician courses within a framework of undergraduate or vocational courses; (7.) a single school might be developed to offer a continuing education curriculum for graduates of all schools; (8.) information science technology, and systems management will continue to be expanded in the curricula of the schools; (9.) more courses will be offered dealing with public relations, legislation and the political climate of libraries; there will also be more courses in research methods, and statistics; (10.) future graduates will be required to take state and/or national examinations to qualify for entrance to the profession; (11.) there may be more attention to specialization and subject mastery in the schools; some schools may decide to specialize in one type of library work. (12.) teaching methods will be varied and will make use of modern technology and the new teaching aids; (13.) interdisciplinary study will be encouraged; (14.) classes may be offered outside the context of the traditional classroom; (15.) students may be able to enroll in more than one school and thus have access to the superior specialty resources of more than one. (16.) students will be involved in future planning and in training for cope-ability.

In order to carry out plans for libraries and library education in the future it is suggested that a national commission be appointed and charged to do long range planning for library education on a national level. This commission, in preparation for the future could attempt to (1.) anticipate the conditions, needs and aspirations of society; (2.) try to determine the information and knowledge needs of man and society; (3.) establish purposes and objectives of libraries as they relate to these needs; (4.) work with other institutions and agencies in achieving the library's

objectives; (5.) prepare a program in library education which will prepare future librarians to be leaders in library development. Libraries are and will be important living agencies; they are vital forces in an information consuming nation. They are essential institutions in the communication of knowledge and the progress of society. A statement from the recent publication, Libraries At Large, summarizes the significance of the library in society:

> "The future of our free society depends on our access to accumulated knowledge organized to facilitate learning and scholarship. Libraries are not inert repositories of artifacts and documents of the past or mere bits and pieces of information. Libraries are living agencies for intellectual enrichment and progress, for public policy and social improvement through scholarship. They are at once man's memory and the embodiment of his faith that despite the tragic vicissitudes of our time, his creations, his ideas and his spirit will live forever."(24)

Footnotes and Bibliography

1. Robert W. Prehoda, Designing the Future (Philadelphia: Chilton Book Company, 1967), p. 5.

2. Ibid., p. 6.

3. Ibid.

4. Chamber of Commerce of the United States, America's Next 30 Years: Business and the Future (Washington, D. C., [1970?])

5. Sophia Travis, "The U. S. Labor Force: Projections to 1985," Monthly Labor Review, (May, 1970), 3-12.

6. Chamber of Commerce of the United States, Economics of Change (Washington, D. C., 1969).

7. Daniel Bell, "Remarks of the Moderator," in The Management of Information and Knowledge, Washington, D. C., Committee on Science and Astronautics, U. S. House of Representatives, 1970), p. 14.

8. Ibid., p. 15.

9. Herman Kahn, "The Emergent United States," in The Management of Information and Knowledge, Washington, D. C., Committee on Science and Astronautics, U. S. House of Representatives, 1970), p. 14.

10. Charles A. Reich, The Greening of America, (New York: Random House, 1970), p. 358.

11. Ibid., p. 362.

12. Ibid., p. 373.

13. Thomas F. Green, "Education and Schooling," in Management of Information and Knowledge, (Washington, D. C., Committee on Science and Astronautics, U. S. House of Representatives, 1970), p. 116.

14. Ibid.

15. George Kozmetsky, "Education As An Information System," in Management of Information and Knowledge, (Washington, D. C., Committee on Science and Astronautics, U. S. House of Representatives, 1970), p. 92.

16. Janice M. Ladendorf, "The Special Librarian in the Modern World," Special Libraries, LXI (December, 1970), p. 535.

17. Dan Lacy, "Social Change and the Library," in Libraries At Large, ed. by Douglas M. Knight and E. Shepley Nourse. (New York: R. R. Bowker, 1969), p. 18.

18. Vern M. Pings, "The Library As A Social Agency," College and Research Libraries, XXXI (May, 1970), pp. 174-184.

19. Douglas M. Knight and E. Shepley Nourse, eds., Libraries At Large (New York: R. R. Bowker Company, 1969), p. 35.

20. Michael M. Reynolds, "Commentary on Education for Special Librarianship," Special Libraries, LXII (March, 1971), p. 125.

21. Ibid., p. 128.

22. Robert W. Prehoda, Desiging the Future, (Philadelphia: Chilton Book Company, 1967), p. 188.

23. Committee for Economic Development, Innovation in Education: New Directions for the American School, (New York, Committee for Economic Development, 1968), p. 20.

Additional Bibliography

Ayres, Robert U. Technological Forecasting and Long-Range Planning. New York, Mc Graw-Hill Book Company, c 1969.

Barbour, Ian G. Science & Secularity; the Ethics of Technology. New York, Harper & Row, Publishers, c 1970.

Chamber of Commerce of the United States. America's Next 30 Years: Business and the Future. Washington, D. C., 1970

_____. Economics of Change. Washington, D. C., 1969.

_____. The Emerging Labor Force. Washington, D. C., 1967.

_____. The Higher Education Picture of the Seventies. Washington, D. C., 1968.

_____. Major Health Issues of the Seventies. Washington, D. C., 1968.

Cowles Education Cooperation. Toward the Year 2018. New York, 1968.

Herman Kahn and Anthony J. Weiner. The Year 2000. New York, Macmillan, 1967.